LISTING OF CLAIMS

1. (Withdrawn) A production process for methanol comprising a synthetic gas production step in which hydrocarbon is reacted with steam to generate synthetic gas comprising main components of hydrogen, carbon monoxide and carbon dioxide, a methanol synthesis step in which said synthetic gas is reacted on a methanol synthesis catalyst and resulting crude methanol is recovered in the form of liquid, and a distillation step in which said recovered crude methanol is distilled to be separated into waste water containing low boiling organic compounds and high boiling organic compounds and refined methanol, wherein used in said methanol synthesis step is a reactor which comprises a reaction tube, an inner tube closed at a lower end thereof disposed almost in the center of the reaction tube, a central tube in which unreacted feed gas flows disposed almost in the center of the inner tube, and a circular catalyst layer charged with a granular catalyst disposed in a circular space surrounded by the reaction tube and the inner tube and in which said central tube is disposed almost in the center of a wholly or partially detachable shielding plate provided at the upper end of the reaction tube.

2. (Withdrawn) The production process for methanol as described in claim 1, wherein in the methanol step, the synthetic gas is reacted on the methanol syntheses catalyst at a reaction pressure of 80 to 120 $kg/cm^2 \cdot G$, and crude methanol is recovered in the form of liquid.

3. (Withdrawn) The production process for methanol as described in claim 1, wherein in the methanol synthesis step, the synthetic gas is reacted on the methanol synthesis catalyst at a catalyst layer inlet temperature of 180 to 260° C, and crude methanol is recovered in the form of liquid.

4. (Currently Amended) A reactor for methanol synthesis comprising a reactor casing enclosing an upper chamber and a lower chamber, ~~having~~ an inlet end connected to the upper chamber into which unreacted gas is fed into said casing through said inlet end and an outlet end connected to the

lower chamber with the reactor casing having one or more reaction tubes of substantially equal length disposed between the upper and lower chamber ~~with upper and lower ends disposed on the inside thereof~~ in a coaxial symmetrical arrangement spaced apart from the reactor casing with ~~and being in communication with said upper chamber into which unreacted gas is fed into said casing through said inlet end;~~ each reaction tube having an inner tube disposed almost in the center of the reaction tube for dividing said reaction tube into a storage compartment for storing catalyst and a cavity for forming ~~to form~~ a first passageway of circular cross section between the inner tube and the surrounding reaction tube with the inner tube being closed at a lower end thereof facing said ~~a~~ lower chamber ~~located~~ symmetrically opposite said upper chamber and being open at the upper end to said first passageway, with each ~~said~~ reaction tube having a separate bed of catalyst stored ~~a catalyst layer disposed~~ in ~~a circular space formed by~~ said cavity formed in the reaction tube ~~and the inner tube~~; a central tube disposed almost in the center of each ~~the~~ inner tube with the central tube having an upper end open to said upper chamber and extending downwardly from said upper chamber a fixed distance above the lower end of said reaction tube for forming a second passageway of circular cross section between said central tube and an inner tube ~~and~~ wherein the length of said central tube is between 1/10 to 2/3 of the length of the reaction tube measured from the upper end thereof for adjusting the relationship between the first and second passageways to provide temperature control of the catalyst bed stored in the storage compartment; an upper shielding plate for partitioning the upper end of said reaction tubes from said upper chamber, tube plates separating the reaction

tubes from said reactor casing with said upper and lower chambers each defining a confined space of predetermined volume at symmetrically opposite ends of said reactor to facilitate a smooth flow of gas therethrough, wherein said unreacted gas flows downwards from said upper chamber through the upper end ~~part~~ of the central tube flowing from said second passageway through said ~~catalyst in~~ first passageway into said catalyst bed in said reaction tube and discharges from said catalyst bed through said lower chamber directly into the outlet end of the reactor ~~from an outlet located in said lower end~~.

5. (Previously presented) The reactor for methanol synthesis as described in claim 4, wherein the inner tube is disposed almost vertically in said reactor.

6. (Cancelled)